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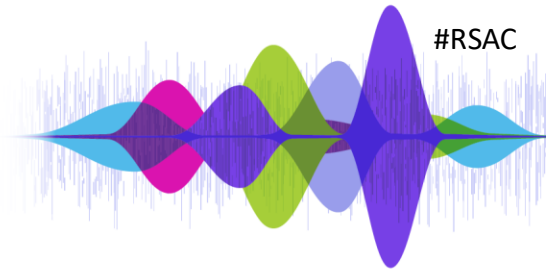
Story Time: Attacker Tactics Against Cloud Infrastructure

Shaun McCullough

Instructor | Course Author
SANS SEC541 Cloud Threat Detection sec541.com/rsa2025
www.linkedin.com/in/cybergoof



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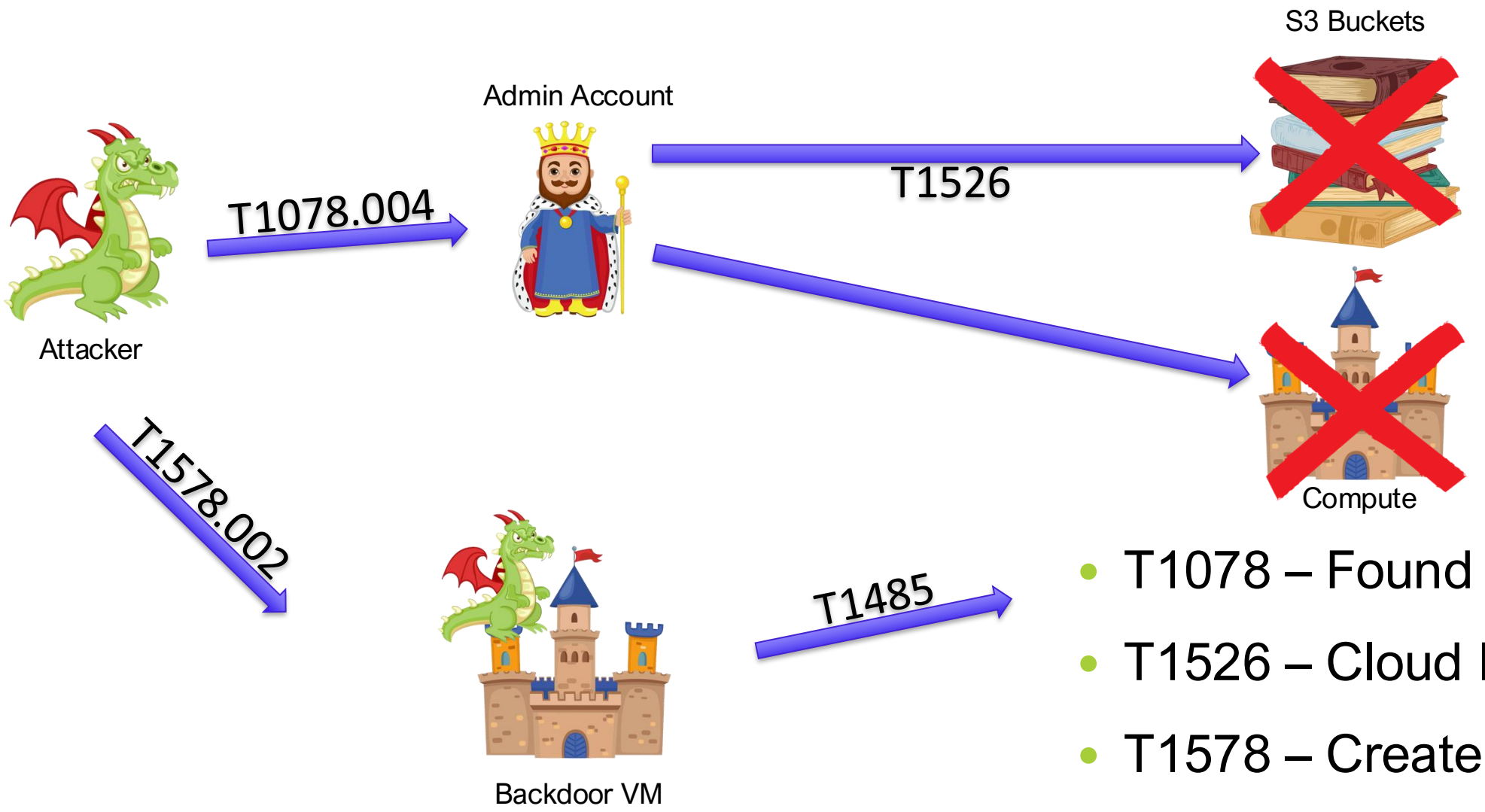
The Siege of Code Spaces



- T1078 – Found creds
- T1526 – Cloud Discovery
- T1578 – Create Backdoor
- T1485 – Data Destruction

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The Siege of Code Spaces

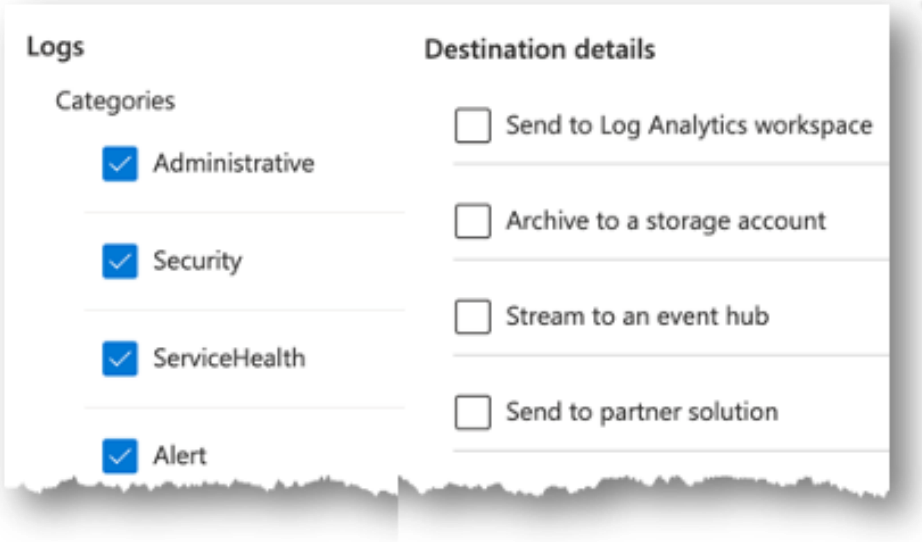
No MFA.

Backups in production = big blast radius

They did not see the backdoor, where are the logs?

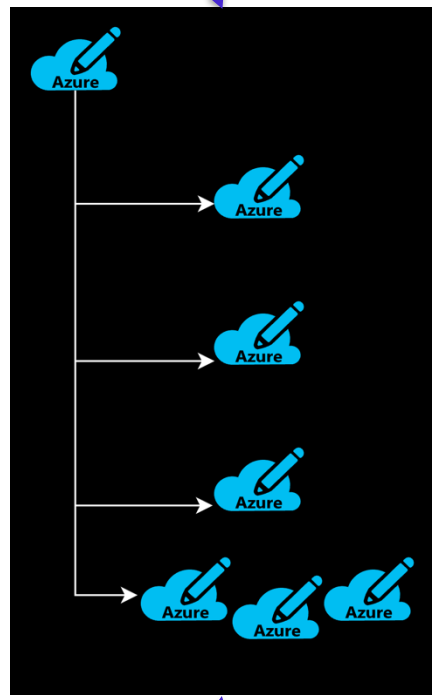
Defense Evasion T1535 – Unused/Unsupported Cloud Regions

Logging in Azure



Diagnostic Settings

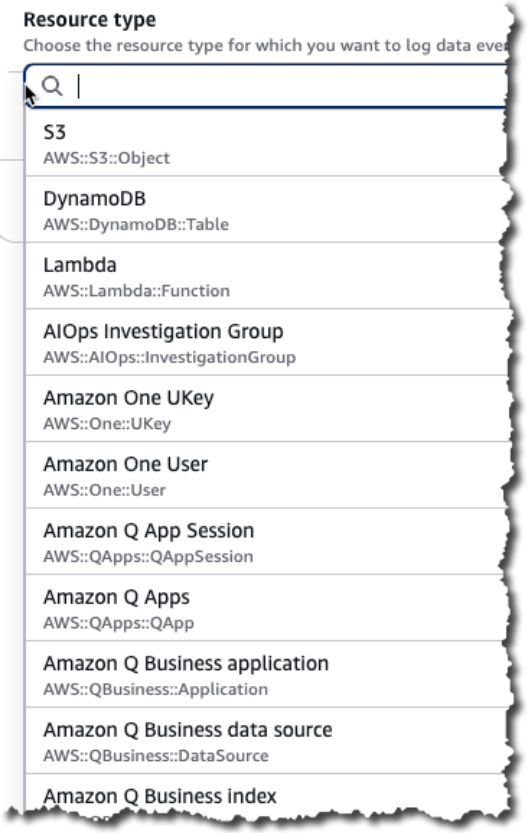
Must apply Diagnostic Settings to EVERY SUBSCRIPTION



Azure Policy

- Audit
- Deny
- Deploy If Not Exist

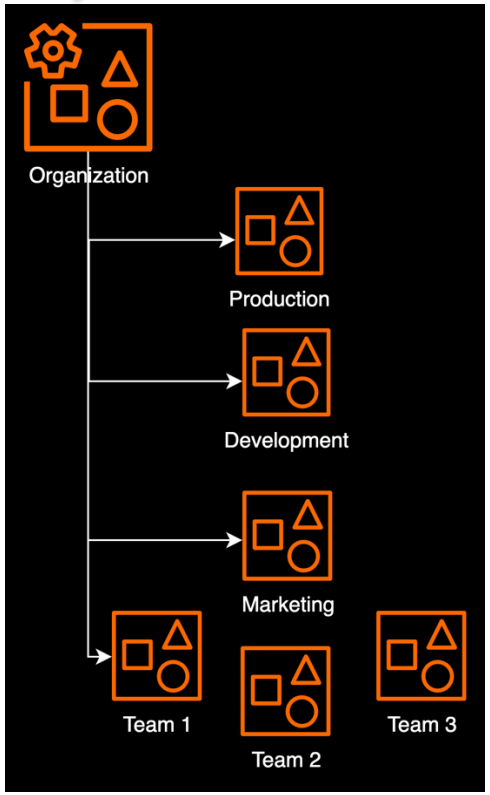
Logging in AWS



CloudTrail

One deployment

covers entire organization.



Build it yourself

- Audit
- Deny
- Deploy If Not Exist

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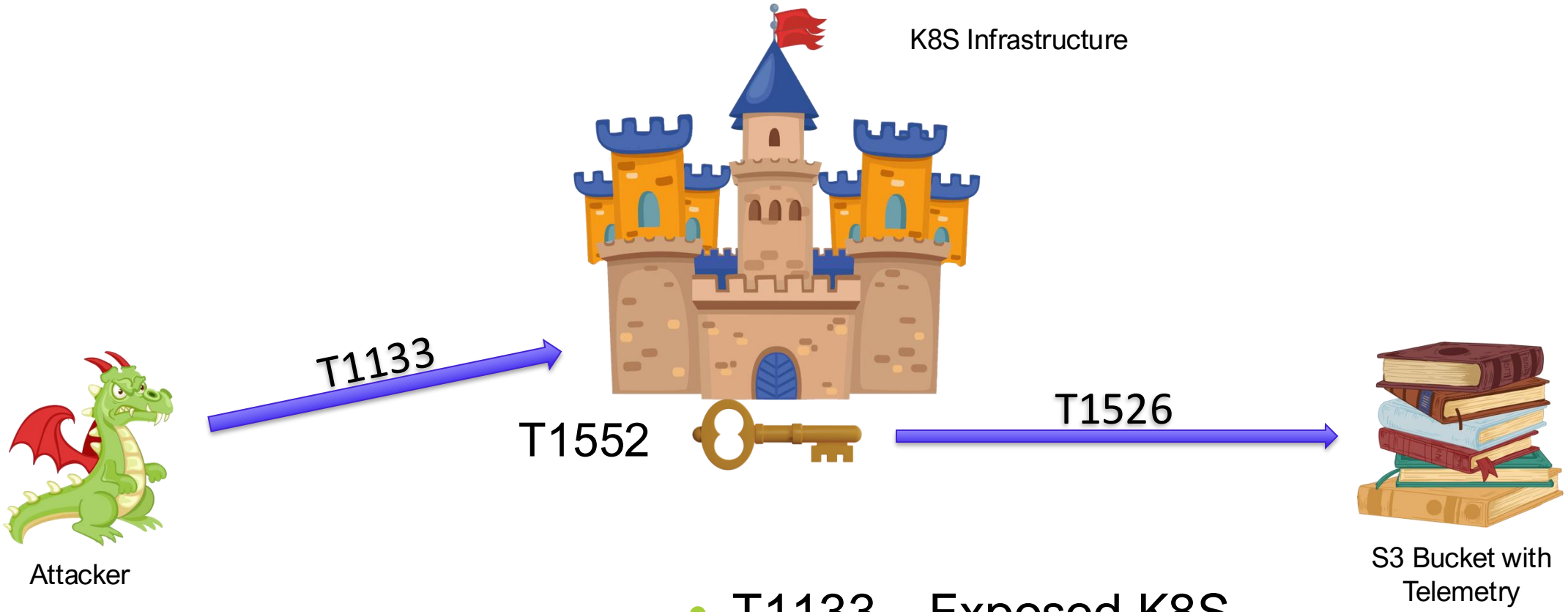
Infiltration of Tesla's Kubernetes Fortress



- T1133 – Exposed K8S
- T1552 – Exposed Creds
- T1526 – Discovery
- T1610 – Crypto Miner

Infiltration of Tesla's Kubernetes Fortress

Improve posture management scanning K8S deployments.

Need more control over container image deployment.

Long term credentials are dangerous.

Lateral Movement T1021.007 – Remote Cloud Services

AWS IAM User (Service Accounts)

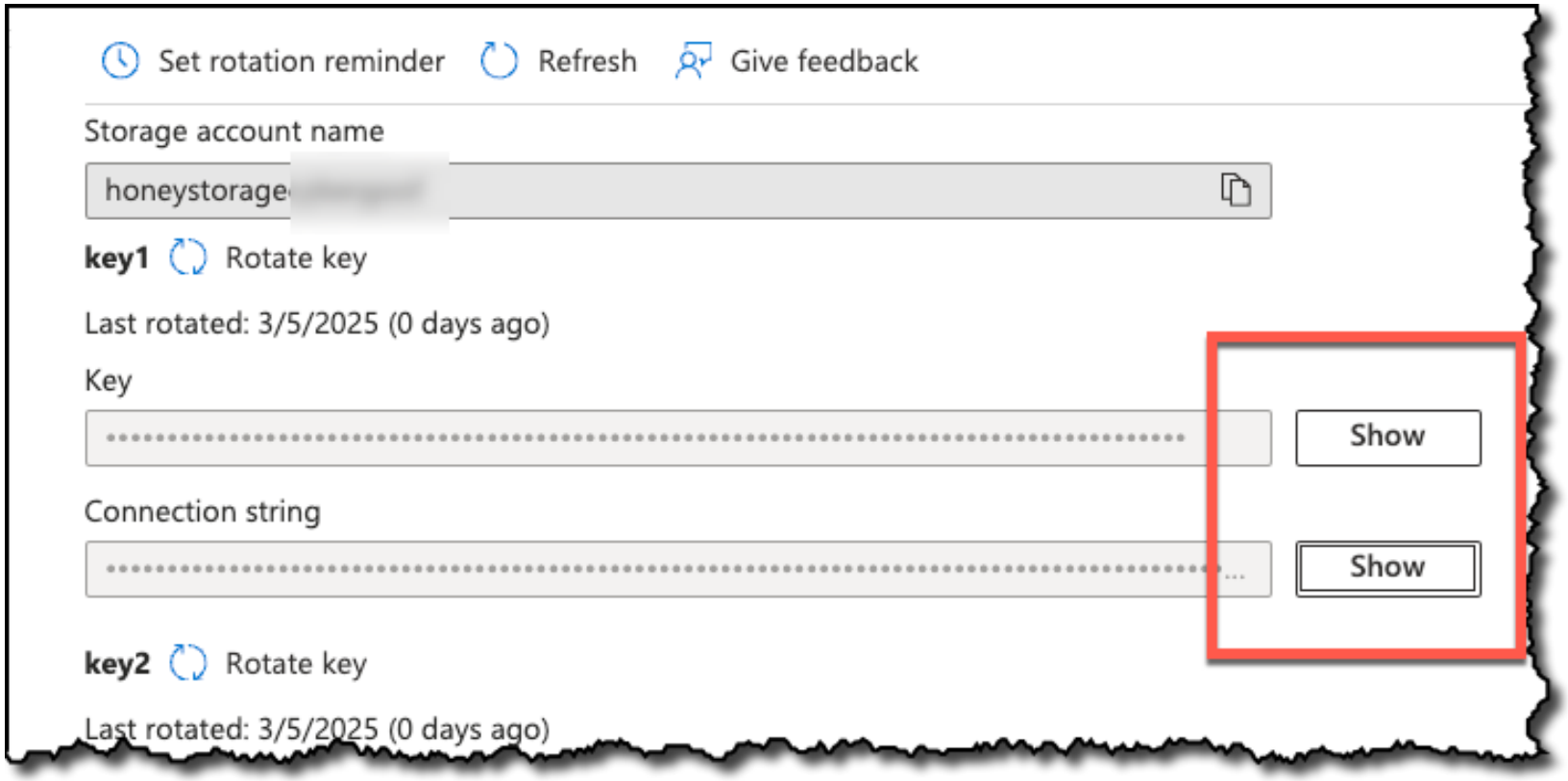
Event name	Event time	Event source	Error code
ListBackupPlans	March 03, 2025,	backup.amazonaws.com	AccessDenied
ListSecrets	March 03, 2025,	secretsmanager.amazonaws.com	AccessDenied
ListDomainNames	March 03, 2025,	es.amazonaws.com	AccessDenied
ListTables	March 03, 2025,	dynamodb.amazonaws.com	AccessDenied
DescribeDBInstances	March 03, 2025,	rds.amazonaws.com	AccessDenied
DescribeInstances	March 03, 2025,	ec2.amazonaws.com	Client Unauthor

- Long term creds
- Anti | Zero Trust
- Usually, over-powered

Get lost all the time

```
"userIdentity": {
    "type": "IAMUser",
    "arn": "arn:aws:iam::                :user/honey_user",
    "accessKeyId": "AKIAYFU23R5YT5CUOB7A",
    "userName": "honey_user"
},
```

Azure Storage Account Access Keys



- Full read/write/delete
- Bypasses EntraID
- Contributor=View Key

ON BY DEFAULT!

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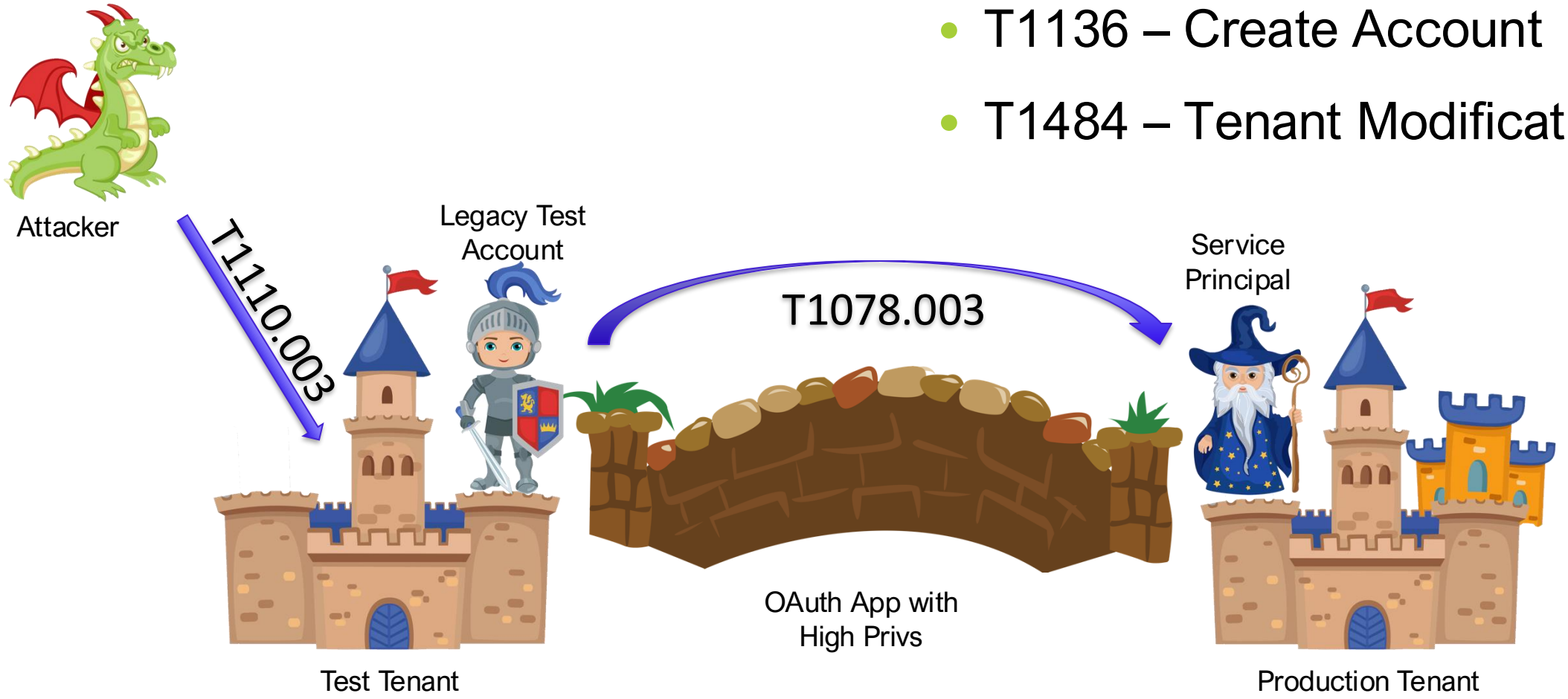
Betraying Trusts in Azure

- T1110 – Password Spray
- T1078 – Valid Accounts
- T1136 – Create Account
- T1484 – Tenant Modification



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Betraying Trusts in Azure

Watch for abandoned/unmanaged infra.

Overly permissive roles are a hard problem.

Audit all trusted relationships between security boundaries.

Initial Access T1199 – Trusted Relationships

Knowing your security boundary

These boundaries occur at various levels, can become apparent as data “crosses” each one.

Customer data ≠ Test data

Internet facing ≠ Internal infrastructure

Production account ≠ Contractor account

Audit and monitor your security boundaries

How to manage security boundaries

- Tools can help: AWS IAM Analyzer, 3rd party software .
- Disable "cross-tenant access" for resources in Azure.
- Regularly audit (by humans) any cross tenant/account IAM resources.
- Enforce ownership – tag all the things.

Architecture, operations, separation of duties must have security boundary enforcement in mind.

What to do on Monday

- Add logging to your security findings/guardrail process.
- MFA all the things.
- Reduce reliance on long term credentials.
- Know your security posture of all deployed resources.
  (If you can't scan it, you can't secure it)
- Audit, alert, investigate your security boundaries.

Start small | Push every day | Measure results

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